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REPORTS

PRINCIPALLY

CONCERNING THE EFFECTS

OF THE

NITROUS ACID

IN THE

VENEREAL DISEASE,

BY THE

SURGEONS of the ROYAL HOSPITAL at Plymouth,

AND

BY OTHER PRACTITIONERS.

PUBLISHED BY

THOMAS BEDDOES, M. D.

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1797.

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ERRATA.

PAGE 5. For *uncias* read *unciam,* and correct a few such *literals,* as the printers speak.

REPORTS *of the* EFFECTS

OF THE

NITROUS ACID

IN THE VENEREAL DISEASE.

Letter from Mr. HAMMICK, Junr. to Dr. Beddoes.

Royal-Hoſpital, Plymouth, July 22, 1797.

SIR,

I do myſelf the honour of acquainting you, that in conſequence of your very ingenious publication on Factitious Airs, (Parts IV. and V.) and your recommendation of the Nitric Acid in Syphilis, I have been induced to make trial of this medicine in that diſorder, under the inſpection of my friend Dr. Geach, who is the ſenior Surgeon of this Hoſpital; and to him I beg to refer for a confirmation of the faithful ſtatement of the ſeveral caſes, and the authenticity of the facts. Further, Dr. Geach has been ſo obliging

as to ſay, that he will readily anſwer, as far as he can, any queſtions relative to this ſubject.

As I am one of the Aſſiſtant Surgeons under him, and many of the venereal wards are in our department, I had an opportunity of ſelecting the *worſt* venereal caſes that were brought into the Royal Hoſpital. The caſes, in which the Nitric Acid has been given, already amount to more than fifty in number; and the ſucceſs has fully anſwered the character which has been given of this newly diſcovered remedy, which effects a cure, for the most part, in a short time, without impairing the appetite, without requiring any preciſe or particular regimen or ſtrict confinement, leaving none of those ill conſequences, or depredations, that often follow the liberal uſe of mercury. The Nitric Acid does not affect the gums, fauces, ſtomach, or inteſtines, by exciting vomiting, diarrhœa, or pain, unleſs the medicine be ſwallowed haſtily, and in large draughts at a time; when thus taken, I have known that it has produced a nauſea, or mawkiſh diſagreeable ſenſation in the ſtomach, and

ſet the teeth on edge by its acidity; all which inconveniences have been prevented, by enjoining the patient to drink the medicine through a narrow glaſs tube.

Not to multiply inſtances, and tire you with a long detail, I beg to ſubmit to your inſpection and conſideration Twelve Caſes, with a requeſt that you will be pleaſed to publiſh them, as they corroborate your own obſervation: and the publication, under your authority, may extend the uſe of the nitric acid in a diſeaſe, ſo ravaging, that few conſtitutions can withſtand the power of two poiſons, the diſeaſe and mercury, operating at the ſame time. Future experience, however, muſt determine whether the cures wrought by nitric acid, will be permanent or not; but if it be permitted to draw concluſions from the progreſs of the ſeveral ulcers; the healthy appearance and firmneſs of the granulations; the ſoftneſs of the parts, and of the cicatrices, little doubt can be entertained but that the nitric acid will, in a great meaſure, ſuperſede the uſe of mercury in the venereal

diſeaſe; and, as yet I have ſeen no inſtances of the diſorder re-appearing after the uſe of this medicine.

I have the honor to be, Sir,

&c. &c.

STEPHEN HAMMICK, Junr.

CASE I.

GEORGE HALL, a Marine, thirty-nine years of age, was received into the Royal Hoſpital at Plymouth, on the ſeventeenth day of April, 1797, for a venereal complaint which he had contracted about three weeks before; at this time he had a large, irregular, foul chancre on the lower part of the penis near the ſcrotum, with an enlargement in the right groin; had never taken any medicine, or applied any thing to the chancre itſelf: the next day, the 18th of April, he was ordered the following drink:

℞

Acidi nitroſi diluti drachmas ij.
Succi limonis uncias i.
Aquæ fontanæ libras ii.
M. bibat quotidie

The ulcer was dreſſed with the ſimple white ointment: he continued his drink daily to the third of May, when the diluted nitric acid was changed for the ſame quantity undiluted, which he took, with the addition of ſyrup, till the 11th day of May; when his chancre was healed, the enlargement in his groin could not be felt, and in every reſpect he became well; he was diſcharged to quarters on that day to go on duty.

N. B. This man never took a grain of mercury.

CASE II.

THOMAS HOMEWOOD, Seaman, twenty-ſix years of age, was received into this Hoſpital on the twenty-ninth day of March, 1797, for a venereal complaint which he had contracted about a month before. He had taken different medicines without effect, for it, on board; the appearance of the diſeaſe, was, a very large

and deep chancre, extending all the length of the penis on the back part; a large and extremely inflamed bubo in each groin, with a profuſe diſcharge of matter from the urethra, accompanied with great heat in paſſing his urine. His buboes were ordered to be fomented and poulticed twice a day, and two drachms of the ſtrong mercurial ointment to be well rubbed in on the thighs at night; which applications were continued to the 2d. of April, when his buboes (now ready to ſuppurate) were touched with the lapis infernalis, and the eſchars were thrown off on the 5th. The next night he uſed the friction again, and continued it to the 10th, when I found him very weak and low, with a violent cough and much expectoration of thick phlegm ſtreaked with blood, profuſe ſweats, and ſuch extreme debility, as not to be able to raiſe himſelf from his pillow, attended with diarrhœa. The chancre and buboes continuing at the ſame time very foul, the friction was diſcontinued, and he was the next day ordered the following drink:

℞

Acidi nitroſi drachmas ij.
Syrupi ſimplicis uncias viii.
Aquæ fontanæ libras ij.
M. Capiat quotidie.

The day after, finding himſelf ſomewhat better, the drink was continued, and from the above alarming ſymptoms yielding, and an entire alteration taking place both in his health and appearance of the ulcers, he took it to the 10th of May, when he complained the drink vomited him. The nitric acid was then reduced to one drachm daily, which he drank without any uneaſy ſenſation in his ſtomach, and continued it in that proportion to the 30th day of May; when his buboes and chancre being healed, and all his venereal complaints entirely gone, the drink was no longer uſed, and he was diſcharged from the Royal Hoſpital on the 5th day of June, in order to join his ſhip.

CASE III.

WILLIAM FRANKLIN, Seaman, thirty-ſix years of age, was received into this Hoſpital on the 28th day of May, 1797, for a venereal complaint, which he ſaid, had made its appearance two months before; for which he had taken a good deal of mercurial medicines on board, without the leaſt effect: in fact, he was now, he ſaid, worſe than at any former period. On examining him, I found a bubo which had ſuppurated ſome time, and appeared to be in a ſpreading ſtate; chancres on the penis; excoriations and ulcers extended to the ſcrotum and round the anus, which gave him ſuch intenſe pain, as to oblige him to keep his bed, only getting out once a day in order to have it made. He was ordered the following drink:

℞

Acidi nitroſi drachm. i ſs.
Syrupi ſimplicis uncias viii.
Decocti lignorum libras ij.
M. bibat quotidie.

The excoriated parts were kept clean. He took this drink to the twenty-ſecond day of June, when his bubo, chancres, and excoriations being healed, and finding himſelf in all reſpects well, he was diſcharged that day from the Royal Hoſpital in order to join his ſhip.

CASE IV.

JOHN WILLIAMS, a Marine, twenty-four years of age, was received into this Hoſpital, on the 1ſt day of May, 1797, for a venereal complaint, which he had contracted ten days before. He had now enlargements of the glands in each groin, and a chancre on the prepuce: had never taken any medicine, or made any application to it; the ſwelling in his right groin was the ſize of an egg, and the other in his left, ſomewhat ſmaller. He was ordered that day the following drink:

℞

Acidi nitroſi drachmas ij.
Syrupi ſimplicis uncias viii.

Aquæ fontanæ libras ij.
M. bibat quotide.

He was ſtrictly forbidden to apply any thing to the groins: he took the nitric drink that day, and continued it in the ſame proportion daily to the 8th day of June, when the indurations were entirely diſperſed (not even the ſmalleſt hardneſs to be felt) and the chancre healed. He was diſcharged that day, viz. the 8th day of June, to go to quarters.

N. B. This man had not taken any mercury.

CASE V.

THOMAS M'GRATH, Seaman, twenty-ſix years of age, was received into this Hoſpital on the 18th day of May, 1797, for a venereal complaint, which he had contracted about a fortnight before. He had now a large and deep ulcer on the ſcrotum, with much diſcharge and inflammation; a pain and ſlight ſwelling in the right teſticle, and a ſwelling in his groin:

had not taken any medicine for it; the next day he was ordered the following drink;

℞

Acidi nitroſi drachmas ij.
Syrupi ſimplicis uncias viii.
Decocti lignorum libras ij.
M. bibat quotidie.

The ulcer was dreſſed with the ung. ſimpl. He took the drink as ordered, and continued it in that proportion daily to the 15th of June, when his ulcer was healed, the ſwelling in his groin and teſticle gone, and all his venereal complaints, he was diſcharged on the 15th day of June, from this Hoſpital, in order to join his ſhip.

N. B. This man had not uſed mercury.

CASE VI.

THOMAS PLANGETT, Marine, twenty years of age, was received into the Royal Hoſpital on the 17th day of April, 1797, for a venereal complaint, which he had contracted

about ſixteen days before; had not uſed any medicine for it: he had now two large indurated glands in the right, and a larger one ſtill in the left groin, and a venereal eruption on the Pubis. The following day he was ordered:

℞

Acidi nitroſi drachmas i ſs.
Syrupi ſimplici uncias vi.
Aquæ fontanæ libras ij.
M. bibat quotidie.

He took it that day and continued it in the ſame proportion daily to the 15th day of June, when the ſwellings in his groins being gone, and the eruption having entirely diſappeared, he was diſcharged on that day, in order to go to quarters.

N. B. This man had not uſed any mercurial preparation.

CASE VII.

JOHN BURR, Seaman, twenty-ſeven years of age, was received into this Hoſpital, on the

5th day of June, 1797, for a venereal complaint, contracted about a month before; this man had not taken any thing for it. Its appearance at this time was a large bubo in the right groin, which had ſuppurated two days before; two chancres appeared on the lower part of the penis; he had phymoſis with great inflammation, and an appearance tending to gangrene; and an ulcer on the ſcrotum: the ſame day he was ordered the following drink:

℞

Acidi nitroſi drachmas ij
Syrupi ſimplicis uncias viii.
Decocti lignorum libras ij.
M. capiat quotidie.

The penis and bubo were poulticed, and the chancres dreſſed with the ſimple white ointment. He took his drink that night, and before he had taken it ſix days, there was an apparent alteration for the better. He continued it to the 10th day of July, when his bubo, chancres, &c. being healed; the phymoſis entirely removed, and the man in perfect health, he was

ordered from the venereal ward, to another ſurgical ward, as he had a hernia.

N. B. This man had never uſed mercury.

CASE VIII.

WILLIAM SMITH, a Marine, twenty-two years of age, was received into this Hoſpital on the 26th day of May, for a venereal complaint; an extremely large and painful node was diſcovered on the right tibia, which he ſaid he had perceived coming on nearly four months: he had ſuffered excruciating pains in that part and in his limbs at night, which became much eaſier as the morning advanced; he contracted this diſeaſe four years ſince, but thought himſelf perfectly cured, but had pains in his limbs ever ſince the commencement of the diſeaſe, at times: but not ſo violent as to prevent him from doing his duty, till a month ſince. He was much emaciated, and low ſpirited from the conſtant pain he ſuffered: he was ordered the following drink:

℞

Acidi nitroſi drachmas iſs
Syrup : ſimplicis uncias vi
Aquæ fontanæ libras ij
M. bibat quotidie.

At the expiration of nine days, he ſaid he had reſted better than for five months paſt : on the 16th day of taking the nitric medicine, his pains had entirely left him, and his node ſeemed diminiſhed ; his appetite returning, and in much better ſpirits. He continued his drink to the fourteenth day of July, when his pains and ſwelling on the tibia were gone, his appetite and ſpirits good, and his health reſtored. He was diſcharged on that day, to go on duty, returning many thanks for his cure.

CASE IX.

THOMAS EDMED, Seaman, aged twenty-four, was received into this Hoſpital on the 9th day of February, 1797, for a venereal complaint contracted about three weeks before, and

had taken Mercury on board for it. At this time he had a very bad phymoſis: the prepuce being very thick and hard with a profuſe diſcharge appearing to come from chancres ſituated behind the glans penis; he had alſo great difficulty in paſſing his urine, accompanied with a chordee. This man was very delicate with fair complexion; he was ordered the next day to rub well into his thighs at night, two drachms of the ſtrong mercurial ointment, and to apply twice a day, a poultice of lintſeed meal &c. to the penis: he rubbed between the 10th of February and 12th of March, twenty-three times, and fumigated the part night and morning with the cinnab: factit. On this day, viz. 12th of March, he was ordered to forbear the friction, as he was low and weak, and his mouth very ſore and ſwollen; he ſpat in the four and twenty hours, nearly three pints; diarrhœa, cough, pain of breaſt, and his venereal complaint appeared much aggravated. He was put on a nutritive diet, with wine and cordials: he was ordered an infuſion of bark in lime-water;

two grains of opium every ſix hours, and a quart of the decoction of woods, to be taken daily. He was kept on that courſe without gaining ground in any reſpect, to the 12th day April: he was ordered then mercurials in ſmall doſes, combined in different forms; various fumigations and poultices without the leaſt ſucceſs, until the 14th day of May, when he complained of his being a great deal worſe; ſo weak that he could not quit his bed, or only be helped out to have it made once a day; his diarrhœa ſtill continued, his cough and ſweats increaſed, his appetite was entirely gone; he had nauſea, excruciating pains in his legs and arms at night, and was exceedingly reduced: in this ſtate he was ordered to leave off his bark, decoction of woods, opiates &c. and to truſt entirely to the following drink:

Acidi nitroſi drachmam iſs
Syrupi ſimplicis uncias viii.
Aquæ fontanæ libras ij.
M. bibat quotidie.

Before he had taken this nitric medicine twelve days, he thought his pains were leſs ſevere, and

his diarrhœa ſomewhat abated: on the ſeventeenth day, the venereal complaint appeared better; he could get the prepuce a little way back, and he thought himſelf in every reſpect better. On the twenty-ſixth day of taking this drink, he was able to walk about his ward with ſome aſſiſtance, and on the 16th day of June, could get the prepuce entirely back over the glans penis. He continued his nitric drink to the 10th of July, when his venereal complaint was entirely well: diarrhœa, pains, cough, and ſweats had left him; his appetite good, and grown plump and ſtrong, he was diſcharged that day at his own deſire, to join his ſhip.

CASE X.

MURTY LAWLER, a Seaman, thirty years of age, was received into this Hoſpital on the 1ſt day of June, 1797, for a venereal complaint which he had contracted about three weeks before; when it made its appearance by a ſmall chancre on the glans penis, which con-

tinued to ſpread notwithſtanding he had taken medicine for it on board. He informed me that three days before his arrival here, he perceived a black ſpot on the right ſide of the glans penis; on the 1ſt day of June, (the day of his coming here) there was a large and deep ſphacelus on the glans penis, paraphymoſis, great inflammation, on the penis, and a large deep chancre on its lower part cloſe to the ſcrotum, which he ſaid, had bled much; indeed, the *whole penis* had an appearance tending to gangrene; he was ordered to be fomented twice a day, with flannels wrung out of a decoction of chamomile flowers and poppy heads, then to apply the yeaſt poultice, and take the following drink daily:

℞
Acidi nitroſi drachmas ij.
Syrupi ſimplicis uncias viii.
Aquæ fontanæ libras ij
M. bibat quotidie.

℞
Opii grana ij.
Sumat horâ ſomni.

The next day, viz. the 2d, he had ſlept but little, and the ſphacelation had ſpread; the drink, opiate, &c. ordered as yeſterday. The 3d, ſtill worſe; drink, &c. continued. 4th, the ſphacelus did not appear to have ſpread; drink, &c. continued. 5th, the ſphacelus had ſome marks of ſeparation; there was a bleeding during the night, from the chancre on the lower part of the penis; drink, &c. continued. 6th, better; drink, &c. ordered as uſual. 7th, the eſchar came away this morning in the poultice, by which nearly half of the glans penis was deſtroyed; nitric medicine, &c. as before, and continued to the 13th, when the poultice was changed for a dreſſing of the unguentum ſimplex, (*i. e.* unguent: adipis ſuillæ) and the drink was taken daily in the ſame proportion, to the 10th of July, when being perfectly well in every reſpect, he was diſcharged at his own requeſt, to join his ſhip.

CASE

CASE XI.

THOMAS CHISWICK, Seaman, twenty-eight years of age, was received into this Hoſpital on the 17th day of June, 1797, for a venereal complaint, which he had contracted about ten days before. He had never taken any medicine for it: he had now chancres on the glans penis; paraphymoſis, and a large ſwelling in the right groin; he was ordered the day after, the following drink:

℞
Acidi nitroſi drachmam i ſs.
Syrupi ſimplici uncias vi.
Aquæ fontanæ libras ij.
M. Capiat quotidie.

He took it that day, and continued his nitric medicine, in the ſame proportion, to the 17th day of July, when his chancres were perfectly cured, paraphymoſis and enlargement in his groin gone, he was diſcharged at his own deſire, to join his ſhip that day.

N. B. This man never took any mercurial medicine.

CASE XII.

SAMUEL POPE, Seaman, twenty years of age, was received into this Hoſpital, on the 4th day of June, 1797, for a venereal complaint, which he had contracted about ten days before. The account he gave me was, that about ſix days before his arrival here, he found great pain and difficulty in paſſing his urine, attended with a phymoſis, and a diſcharge of matter from the urethra; that three days after that, he perceived a black ſpot on the prepuce, which continued ſpreading to the day of his arrival here, when a profuſe hæmorrhage taking place from the dorſum penis, it alarmed him, and he then applyed to his ſurgeon for the firſt time, who immediately ſent him here. I found the whole prepuce entirely mortified, and the mortification had ſeized the upper part of the glans penis, from whence the prepuce had, from its weight in hanging down, been detached; he had alſo much ſymptomatic fever: he was ordered to be well fomented twice a day, and the

yeaſt poultice to be applied, and to take the following drink :

℞

Acidi nitroſi drachmas ij
Syrupi ſimplicis uncias viii.
Decocti lignorum libras ij.
M. capiat quotidie.
Capiat hora ſomni opii grana ij.

5th, has bled ſomewhat during the night, and the ſphacelus on the glans ſeemed to have ſpread ; the nitric drink, &c. continued as yeſterday. 6th, nearly the ſame as yeſterday, only appears to have leſs fever; drink, &c. continued. 7th, the whole of the prepuce sloughed off this morning ; the mortification on the glans had not ſpread : nitric medicine, &c. continued. 8th, there was a detachment of the sloughs, drink, &c. ordered as uſual. 9th, the sloughs came entirely off this morning from the glans, ſo deep as to occaſion ſome alarm that the urine would find its way out through the ſide of the urethra. 10th, appeared to be better, and the nitric drink, &c. was continued without any alteration (except the ulcer being dreſſed with oint-

ment on the 13th in lieu of poultice) to the 17th of July, when the wounds round the glans from whence the prepuce had sloughed off & elsewhere, were healed; and he being in all respects perfectly cured of the venereal disease, he was sent from the venereal ward to another surgical ward, as he had a lame arm from a hurt he had received on board some time before.

N. B. This man had never used either Mercury or the Bark.

To the preceding Letter of Mr. HAMMICK I returned, by the earlieſt opportunity, an answer to the following purport:

" I ſhall loſe no time in committing your " valuable communication to the preſs. Your " ſtatement is clear, and I have hardly occaſion " to avail myſelf of Dr. Geach's obliging offer " of further elucidation. But doubtleſs you " will agree with me, that his additional teſti- " mony will be a ſatisfaction to the public.

" With you, the nitrous acid appears to cure " the venereal diſeaſe expeditiouſly and com- " pleatly. The patient alſo, I perceive, comes " from the fulleſt uſe of the remedy with a " conſtitution ſo entire, that neither diet drinks " nor country air, are at all neceſſary.

" I ſhould be glad to know how often, in " your large experience, you have been diſ- " appointed.

" Do you obſerve any peculiar precautions " in the preparation of your acid?

" Do you take pains to aſcertain its ſpecific
" gravity ; or endeavour to bring it to any par-
" ticular ſtate of oxygenation ?

" You obſerve, that the gums have never
" been rendered ſore by this new treatment.
" Have you never remarked a degree of ſaliva-
" tion without ſoreneſs ?

" Do you think the acid ſtops the progreſs
" of the diſorder as ſoon as mercury ?

I am, - - - - -

THOMAS BEDDOES."

To theſe enquiries, I received a very ſatisfac-
tory anſwer in the following letter from Dr.
Geach.

Letter

Letter from Dr. Geach to Dr. Beddoes.

Royal Hoſpital, July 26, 1797.

Sir,

I Do myſelf the honor, agreeably to your requeſt, of writing to you, and aſſuring you that the patients, whoſe caſes Mr. Hammick Junior lately tranſmitted, were regularly attended by myſelf; and every circumſtance was remarked as minutely as poſſible, and is ſtrictly true. So great indeed has been the ſucceſs of this nitric medicine in the venereal diſorder, *that many patients, who had been broken down by an antecedent uſe of mercury, under which the diſorder gained ground, recovered their health and ſtrenglh without the aſſiſtance of diet drinks, change of air, the bark, or any other tonic medicine whatever.* We have had but few inſtances where the ſtomach and bowels have been affected by it; but the precaution of taking it thro' a narrow glaſs tube has prevented the *acid* from affecting the teeth, and the medicine has been

rendered more palatable by mixing ſimple ſyrup with it; and this addition, as far as we have hitherto noticed, has been effectual enough to prevent both mawkiſhneſs and pain. But, although theſe circumſtances have now and then ſucceeded the uſe of the nitrous acid, it does not affect the mouth or produce a plyatiſm. It does not impair the appetite, it does not require any dietetic regimen, or confinement. Indurated buboes have yielded to it without ſuppurating; *Phagedenic buboes have healed after unſucceſsful trials with mercury: in chancres, however large, or ſordid, and in excoriations of the ſcrotum, however fetid and extenſive, the cure, by its uſe, goes on more rapidly than by a mercurial proceſs.* Such chancres and excoriations have been dreſſed only with ſimple ointment, that the patients might not be incommoded by the friction of the linen, and that the effect of the medicine might be better aſcertained, when there was no local application. We have not found, after the chancres have been cured by this medicine, that the throat has been affected;

a circumſtance not unuſual, eſpecially when ſuch ulcers have been dreſſed with any mercurial preparation. *The caſes sent by Mr. Hammick were the worſt that were received into the Hoſpital.*

That the nitrous acid has ſucceeded in fifty caſes, or more, is certain ;—but it has failed in four or five inſtances, and failed too, where the caſes have been apparently ſlight. But whether the failure can be imputed to the inadequacy of the medicine, under particular or unobſerved circumſtances, or to cauſes not yet explored, I know not: future experience muſt throw more light on the efficacy of this medicine, which, at preſent, is only in its dawn. It has removed, in ſome patients, nocturnal pains. In the gonorrhæa itſelf it has heen tried, as very bad caſes only have particularly engaged our attention. In attending to thoſe, we have endeavoured to bring every thing to the teſt of truth, which ought to be the guide to every man in a profeſſion, which has for its object the reſtoration of health, and in a diſorder, which

ſometimes baffles the ſkill of the moſt experienced. Suffer me to own, that when we firſt made trial of the nitric acid, no great opinion was entertained of its ſucceſs. Accuſtomed to give mercury in this diſeaſe, a practice ſanctioned by great authorities and time, we were inclined to think that no medicine but mercury would cure it. There was no biaſs, no predilection therefore, for this new medicine, no attachment to ſyſtem. But as the nitrous acid was ſo reſpectably recommended by yourſelf, this was a ſufficient motive to make trial of it; and nothing but the ſucceſs that has attended its uſe, could authorize us to write in this manner to you, who are the beſt entitled to the earlieſt communication.

The nitrous acid we have uſed, has been prepared according to the London College.

Before I cloſe this letter, it will be doing but bare juſtice to Mr. Hammick, to ſay, that he has been unwearied in his attention to the caſes in queſtion, as indeed he is to every caſe in

which he is profeſſionally engaged, and that his ſkill and integrity merit all the praiſe I can beſtow.

I have the honor to be, Sir,

&c. &.

FRA. GEACH.

Between the receipt of Mr. Hammick's firſt letter, and the printing of the preceding pages, I had received ſome additional information reſpecting the uſe of nitric acid in ſiphylis. This the reader will find below. I was alſo deſirous to learn, whether, in the courſe of the three intervening weeks, any relapſes had occurred to Mr. Hammick; thinking if they had repeatedly happened, one or more, among ſo many patients, would have returned to the Royal Hoſpital. I alſo deſired the moſt particular information, as to the acid employed. My letter produced the following anſwer.

Royal Hoſpital, Plymouth. Aug. 14, 1797.

Sir,

Permit me to thank you for your late favor, and to mention, that ſince I did myſelf the honour of communicating to you the twelve caſes, we have ſtill continued to give the nitric

acid in the ſame diſorder, and with equal ſucceſs.

This medicine has been ſupplied by Mr. Fox, a very eminent chemiſt in Plymouth, and it has alſo been ſent from Apothecaries' Hall; but though thus differently obtained, the ſucceſs has been the ſame; and therefore time only can ſhew the reaſon, why, with other practitioners, your correſpondents, this medicine has not been ſucceſsful.

It is a great ſatisfaction to me, that the trials have been made in a public Hoſpital, under the immediate eye of Dr. Geach. The effect has been well known to many within the walls, and alſo without the walls of this Hoſpital. And in conſequence of the obſervations made by us, ſome private practitioners have given this medicine, and can adduce inſtances of its good effect.

As my reſidence is in the Hoſpital, I had an opportunity of receiving and ſelecting the patients; a ſhort hiſtory of their caſes was inſerted in the preſcription books; the progreſs of the

ſeveral caſes was minutely watched, and the effect of the medicine as much as poſſible aſcertained.

If the patients under the nitric courſe had not been cured, they would not have been either diſcharged from the Hoſpital, or received into their ſhips: removed from our notice, we cannot as yet know whether their cures have been permanent or not.

With great reſpect, Sir,
I remain, *&c. &c.*
STEPHEN HAMMICK, Junr.

In a letter dated Aug. 22d. Mr. Hammick expreſſes his own and Dr. Geach's ſatisfaction on account of the coincidence of the obſervations of Mr. Cruikſhank and others, with thoſe made in the Royal Plymouth Hoſpital. He hopes the facts aſcertained by diſtant and unconnected practitioners, willbe effectual in recommending the nitrous acid to notice. He adds: " Permit me to mention, that it has been the practice for

more than 20 years, with Dr. Geach, to give 6 or 8 ounces of recent lemon juice, with an equal proportion of ſimple ſyrup, daily, to patients worn down with the venereal diſeaſe, and particularly in phagedenic buboes, which had ſpread under a courſe of mercury; and for the laſt four years and upwards, ſince I had the happineſs of acting under him in this Hoſpital, I have ſeen the good effects of the lemon juice in ſuch caſes. Dr. Geach candidly owns, that the utility of lemon juice was firſt ſuggeſted to him by the late Sir William Fordyce, who had ſeen, in long and extenſive practice, its good effects. Although the Lemon Juice thus ſucceeded with Sir William Fordyce, and with us in this Hoſpital, yet the cures have not been ſo rapid, nor its ſucceſs equal to that of the nitrous acid."

"I embrace the firſt moment after reading Dr. Rollo's book, to ſend this Letter, which, I hope will reach you early enough for publication."

STEPHEN HAMMICK, Junr.

Letter from Mr. SANDFORD, Surgeon.

WORCESTER, Aug. 21, 1797.

Dear Sir,

IF you ſhould be of opinion that Medical Practitioners will be induced by the peruſal of the following imperfect outlines, (for the caſes cannot be ſtiled otherwiſe) to make further experiments, I ſhall be very happy. The very valuable communications you have received, will, I have no doubt, prove of real importance in the ſcience of medicine: and under ſuch circumſtances, ſome of the following facts may poſſibly be regarded as bearing a ſhare in evidence of the beneficial effects of this acid.

Finding from the accounts of Mr. Scott of Bombay, publiſhed in your 5th part of "Conſiderations on factitious airs," that the nitric acid exhibited in the manner he there directs, conveyed oxygen to the ſyſtem, in a leſs operose method than by the preparation of this gas from manganeſe, &c. my intentions were princi-

pally directed to adminiſter it in all thoſe caſes that fell under my care, where this remedy ſeemed likely to prove beneficial; or in other words, where oxygen *had* been found ſerviceable, or where it ſeemed indicated.

From amongſt the numerous trials that I have made, the following caſes are ſelected, as moſt concluſive of its effects. I have related the only unſucceſsful caſe I have met with, becauſe I think it would be unjuſt to the impartial enquirer, to mention *only* the ſucceſsful caſes in which this medicine has been had recourſe to.

The preparation I made uſe of in all the caſes here mentioned, was the *nitrous acid* deprived of its phlogiſton (as it is called) by ſimple boiling in an open retort, till the red fumes ceaſed.

CASE I.

I. F. aged 24, by trade a weaver, was admitted an in-patient in the Worceſter Infirmary, March 4th, 1797. He had been ſubject to what had been called Fiſtulas in Ano, for up-

wards of three years. Upon examination, two *very* ſmall orifices were diſcernable on the nates, very near the perinæum, but too ſmall to admit a common ſized probe. A whitiſh opake fluid was diſcharged from them, and the parts ſurrounding ſeemed hard and callous. As, from his own confeſſion, there was ſome reaſon to ſuſpect a ſyphilitic affection, as he had no cough, and was in every reſpect languid and debilitated, I wiſhed to make trial of the *nitric acid*, with an intention of conquering the ſyphilitic affection, as well as invigorating the ſyſtem. He began with ʒ j. mixed in a quart of water, the whole of which was directed to be taken within the courſe of twenty-four hours, and the fiſtulous orifices were dreſſed with mercurial ointment. In the courſe of a week he found himſelf much better, his appetite increaſed, and to uſe his own expreſſion, "he thought he felt ſtouter." The quantity was now increaſed to ʒ iſs. and at the end of another week to ʒ ij. to be taken within the ſame ſpace of time. The orifices ſtill continuing to ſecrete a ſmall quan-

tity of matter, the mercurial dreſſing was now laid aſide, and he was directed to uſe a ſomentation of vinegar and water to the parts twice a day, and to keep ſoft cloths wet with this liquid, conſtantly applied to them. In a ſhort time the diſcharge ceaſed entirely, the orifices healed, the calloſity diſappeared, and the man found himſelf perfectly well. Before he quitted the Infirmary, he omitted his medicine for a fortnight, without any of his ſymptoms returning, or experiencing any relapſe in his general health. He was therefore diſcharged completely cured, April 29th.

CASE II.

J. W. aged 45, had, in the early part of his life, been a ſoldier; and during an engagement, had been wounded in the perinæum, neck of the bladder, rectum, &c. Since which time, he has never been quite well; the parts have been imperfectly healed, and he has been afflicted with variety of complaints; ſome of which appear to have been increaſed, if not produced, by a

habit of inebriety, to which he acknowledges he has been ſubject. He was received into the Infirmary for an ill-conditioned ulcer of the Leg, accompanied with eriſipelas of the ſcrotum, and anaſarcous ſwellings of the whole body; but particularly of the lower extremities: he had many other ſymptoms of general debility.

I eſteemed this a fair caſe to make trial of the powers of nitric acid. But though I began with a ſmall doſe, it evidently diſagreed with him. I then gave him two or three doſes of ſquills and digitalis. Theſe increaſed the flow of his urine, and in ſome degree abated the anaſarcous ſwellings. I then again made trial of the nitric acid; it produced the ſame unpleaſant effects as before, together with heartburn, cholic, flatulancy, &c. though joined with an aromatic tincture. I was therefore obliged to lay it aſide a ſecond time, though not before it had affected his gums with ſoreneſs, and produced a ſlight ſalivation. (This and one other are the only patients to whom it has been given, that have been ſo affected by it.) The poor man was now

made an out patient, and ſtill continues to drag out a miſerable exiſtence, which is merely rendered tolerable by occaſional doſes of opium.

CASE III.

Though the laſt mentioned patient was not benefited by the nitric acid, the ſubject of the following experienced greater and more decided good effects from it, than any patient I ever adminiſtered it to.

On the 25th of March, R. H. aged 22, a farmer's labourer, was ſent to the Worceſter Infirmary with a lumbar abſceſs, that for ſome weeks paſt had ſuppurated, and diſcharged itſelf through a ſmall opening above poupart's ligament in the right groin: the thigh on that ſide was conſiderably enlarged, inflamed, and painful on preſſure; he could not bear to be ſupported on horſeback, and was therefore ſent in a cart. Upon his admiſſion, I thought his caſe ſo hopeleſs, and fearful that little could be done to benefit him by medicine or ſurgery, I was only anxious to have him ſent back into the

country as ſoon as poſſible, being apprehenſive that confinement in the Hoſpital would only haſten his death, which at this time ſeemed inevitable. In a week's time, with great difficulty, he underwent the fatigue of a journey home again, in the ſame cart that brought him here. Before he quitted the Infirmary and was made an out-patient, it occurred to me, that it was probable the nitric acid might be tried to advantage in this caſe. I accordingly began by giving him ʒ i. mixed in a pint of water, which he took in the courſe of twenty-four hours. He ſaid it felt warm at his ſtomach, and at firſt taking fluſhed his face; he continued it however with little interruption, from April 4th, to June 10th; a week after which time, to my very great ſurprize, he walked from his houſe (eight miles diſtant from Worceſter,) and called upon me. He looked ſo different from what he did when laſt I ſaw him, that I was under the neceſſity of enquiring his name and caſe, before I could recollect him. Mr. Price, the Apothecary's aſſiſtant at the Infirmary, was equally ſurprized when he called there.

The wound in his groin was only dreſſed ſuperficially, with a ſimple cerate of wax and oil. The diſcharge, he informed me, had gradually leſſened, till it ceaſed entirely. The ſwelling and inflammation of the thigh had gradually ſubſided, and aſſiſted by the moderate preſſure of a callicoe roller, was finally reſtored to its uſual ſize and action.

As a proof that this unexpected cure was principally effected by means of the nitric acid, the poor fellow had a relapſe once or twice during his confinement at home, for want of his medicine, the quantity diſpenſed to him from the Infirmary having been all taken before he had an opportunity of ſending for more.

CASE IV.

I. B. aged 23, had undergone a regular courſe of mercury by friction and the mouth, till a ſtrong ſalivation was excited, with the hope of curing ſome obſtinate venereal ulcers on his ſhins, and one or two ill-conditioned and ſpreading chancres on the penis. He afterwards took

bark, opium, ſteel, and ſarſaparilla, for ſome months, without any manifeſt advantage. Feb. 20th, he began to take the nitric acid, and on the 8th of April following, was diſmiſſed perfectly cured. His mouth was never (by this medicine) affected with ſalivation, or his gums rendered ſpungy or ſwelled.

CASE V.

I. B. aged 35, was admitted an out-patient of the Worceſter Infirmary, July 9th, 1797, for an ulcer near the right condyle of the lower jaw; a ſmall portion of the interior part of the jaw was laid bare—was becoming carious, and the diſcharge highly offenſive. The carbon cateplaſm was immediately applied to the ulcer, for the purpoſe of correcting the fœtor, and the inſide of his mouth was examined, to determine whether it might not in ſome meaſure have been occaſioned by decayed teeth; but this not being found to be the caſe, the poultice was perſiſted in till the wound put on a cleaner appearance. During this time, the man confeſſed to a pro-

ſeſſional gentleman of my acquaintance, that he, at that time, was affected with venereal complaints. The next time I examined him, he informed me that he had lately had a ſlight hernia humoralis, and other ſymptoms of venereal infection. The charcoal application was now laid aſide, and the wound dreſſed with mercurial ointment; and at the ſame time he was ordered to take the *nitric acid* internally ʒ ij. in 24 hours. This medicine he began to take July 18th; and this day, Aug. 19th, was diſmiſſed, cured; the ulcer in the jaw being completely healed, and no ſymptom remaining of venereal infection.

I have found the nitric acid ſucceſsful in various caſes, where no other medicine had been previouſly given; and in ſome, after the failure of the bark, and many other efficacious *tonics* as they are generally called. It may be preſumed, therefore, that when the efficacy of this medicine has been more generally introduced into practice, and ſucceſsfully employed, it will be

eſteemed a valuable acquiſition to the healing art.

I remain, dear Sir,

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W. SANDFORD.

Letter from Mr. BAYNTON.

Dear Sir,

In compliance with the requeſt of your yeſterday's favour, I herewith ſend you an account of two *venereal* patients, who were cured of the laſt ſtage of *that* diſeaſe, after a failure of carefully conducted mercurial courſes. On the 6th of January, 1795, a man named ———, about 20 years of age, applied to me for the cure of venereal ulcerations, and eruptions upon his arms, breaſt, and forehead. He ſaid, that about 10 months before, he had contracted a venereal complaint, of which the firſt ſymptoms were chancres, and buboes that ſuppurated; that he had applied to an itinerant practitioner for relief, and by his aſſiſtance, was freed from thoſe complaints; but that inconveniences of a more diſtreſſing kind were ſoon obſerved to ſucceed their removal; that his throat became obſtinately ſore, and that ulcerations and blotches ſoon followed. I or-

dered him to take half a grain of the muriated quickſilver, with an equal quantity of opium, morning and evening; and to drink with it, half a pint of a decoction prepared with the uſual quantities of guaiacum, ſaſſafras, mezerion, and liquorice. Theſe medicines were perſevered in till the middle of May, and continued ſome weeks after the removal of the ſymptoms for which they were exhibited.

I did not ſee him from that time till the 25th of Auguſt: he then applied for the relief of a train of ſymptoms that nearly reſembled rheumatiſm. He had much pain in the larger joints, with an accelerated pulſe, and a regular increaſe of pain and fever every evening. He had been employed in the open air ſome time before this application, and had, as he ſaid, been ſometimes improperly expoſed. I therefore did not heſitate to conſider the complaint as rheumatick, and to treat it accordingly. The ſaline and other medicines, with antimonials, liniments, &c. were tried till the end of Septr. without any advantage. It was not till the beginning of January, 1797, that

any thing could be obſerved, which rendered it probable that his complaints were occaſioned by venereal poiſon. About that time nodes began to appear upon his ſhins, and gradually increaſed till the 20th; when he was directed to take two drachms of the ſtrong nitrous acid, or aqua fortis, diluted with two pints of water, every day, in any way he could with the leaſt inconvenience. In leſs than three weeks his pains began to abate, and his health, which was much impaired, to return. The medicine was continued till the 25th of April, when the pain and ſtiffneſs of the large joints, which before that time was ſo conſiderable as to render it probable that the diſeaſe would end in incurable lameneſs, together with the excreſcences upon the tibiæ, and all his other inconvenient ſymptoms, except weakneſs, were perfectly removed.

A conſtant diſcharge of ſaliva, equal in quantity to what would have been ſecreted under a mild mercurial courſe, attended the adminiſtration of the acid in this caſe; but without any ſoreneſs of the mouth, or diſagreeable ſmell.

CASE II.

WM. GREENSLADE, aged 21; a private in the Artillery, contracted a venereal complaint about the beginning of March, 1796. He had a chancre, and a bubo which ſuppurated; and took mercurials by the direction of his acquaintance and fellow-ſoldiers, till the 1ſt of April; when he became a patient in the Royal Hoſpital at Woolwich, and continued there a month, during which time his mouth was kept in a conſtant ſtate of ſoreneſs, by the uſe of mercury. On the 1ſt of May he was diſcharged, apparently cured; but in three months after, his throat became ſore, and continued ſo till May, 1797; he then began to feel nocturnal pains in the breaſt, and frontal bones, and to perceive nodes upon the ſhins, together with a ſwelling upon the ulna, near the wriſt of the right hand. On the 8th of June, I was requeſted by ſerjeant Evans of the ſame corps, to render him aſſiſtance. His pain had then ſo much reduced him, and the joints of his knees were ſo much enlar-

ged, that he could not turn in his bed without difficulty. A drachm of mercurial ointment was directed to be rubbed into his thighs every night, and a decoction of guaiacum, ſaſſafras, &c. to be taken as uſually directed. On the 11th, his pains were ſo great as to require the aſſiſtance of opiates, which, with the frictions and decoction, were continued till the 21ſt of July, a period of ſix weeks, without in any degree abating his pain or ſwellings. His health was then much impaired, his appetite gone, his pulſe quick and ſmall, and his general appearance hectical. On that day, two drachms of the nitrous acid diluted with two pints of water, was ſent him, and he was directed to take as much of it as he could in the day. The firſt day, he drank the whole quantity; but was ſo much griped by it that he could not afterwards be prevailed upon to take more than a pint, or a pint and a half, in the 24 hours. In leſs than ten days, his pains began to abate, and his health to mend. His recovery has been ſo rapidly advancing ſince, that I yeſterday found, when I called to ſee him,

that he had walked out to take the air, and that except the ſwelling upon his right arm, and ſome ſtiffneſs of the knee joints, he was free from every ſymptom of diſeaſe. In this caſe, no ptyaliſm, or ſoreneſs of the gums, were occaſioned by the medicine.

In another caſe ſimilar to theſe, that had reſiſted mercury in every way, and where this acid appeared to have a fair trial, I could not diſcover that the venereal ſpmptoms were alleviated, though the patient's general health was improved by its uſe. In a caſe of ulceration, attended with actions, ſpecifically diſeaſed, that affected the arm of a patient who had long laboured under ſiphylis, and who had taken very large quantities of mercury without advantage, the acid was alſo tried by my advice without ſucceſs.

I am, dear Sir,

your ſincere ſervant,

Briſtol, Aug. 22. THO. BAYNTON.

Letter from Mr. Bowles, Surgeon to St. Peter's Hoſpital, Briſtol.

Dear Sir,

THE following is an account of the patients to whom the nitric acid was exhibited laſt winter in St. Peter's Hoſpital. You may depend on it as accurate in all eſſential circumſtances.

Aug. 24, 1797. I remain, *&c.*

To Dr. Beddoes. FRA. C. BOWLES.

ANNA HEAVEN, a patient of my own, had a large and foul ulcer on the calf of the leg, bearing all the marks of the ſecondary venereal ulcer; under a courſe of the cort. peruv. and the application of local ſtimulants, the ulcer in her leg healed: but at this period ſome glandular tumors appeared in the neck, which proceeded to ſuppuration; the nitric acid was now given her, beginning with ſixty drops each day, and increaſing the doſe gradually to a hundred and twenty. This plan was continued ſix weeks,

during which no alteration could be perceived, except an increaſe of appetite, and occaſionally, ſome degree of gnawing pain in the ſtomach.

ANN RICHARDSON, a patient of Mr. Salmon's, had nocturnal pains in the bones of her extremities, and nodes on the left ulna and tibia. For ſome weeks ſhe uſed mercury without any apparent benefit. The nitric acid was given her in the ſame quantity as to the laſt patient, and perſevered in for an equal length of time; but without mitigating the diſeaſe. She experienced the ſame increaſe of appetite, and uneaſineſs in her ſtomach, as the former patient.

MARY POWELL, a patient of Mr. Davies's, had nocturnal pains in her bones, and an eruption which was ſuppoſed to be venereal. Mercury had alleviated, but not removed theſe ſymptoms; for about ſix weeks, ſhe continued the nitric acid, in the ſame doſes as the former patients, but it produced no change in the

diſeaſe; the effects upon her ſtomach and appetite were the ſame as in the foregoing caſes. The acid given to theſe women was at firſt the common nitrous acid; but in a few days it was changed for the colourleſs acid diſtilled over ſilver by Mr. W. Clayfield.

Letter from Dr. Girdleſtone.

I have tried the nitric acid in a variety of ſyphilitic caſes, without having been able to effect any cures with it. Thoſe of my patients who have taken it, to the quantity of a drachm and an half, or two drachms daily, have generally found it to produce, within eight or ten days, a copious flow of ſaliva, with tenderneſs and ſwelling of the gums, but not unfrequently an increaſe of the venereal ſymptoms.

I have then generally ſubſtituted the mercurial frictions, with very rapid good effects. But the ſalivation excited by the nitric acid, does not ſeem to prevent the patients from bearing the mercurial frictions as long, without producing ulcerations about the gums, as if no previous tenderneſs had been excited by the acid. I have alſo obſerved, that the nitric acid may be immediately given and perſiſted in after a mercurial ſalivation, without producing any farther alteration upon the gums, unleſs it be that of

enabling the patient ſooner to reſume mercurial friƈtions.

As it is difficult to reſtrain drunkards to acid beverage, I have not been able to try the nitric acid in many liver complaints.

I have relieved one dram-drinker with the nitric acid, under a liver complaint, where a mercurial ſalivation had failed.

After ſix weeks progreſſive convaleſcency and diſcipline, he regained his liberty; and then his abuſe of it ſoon re-produced his diſeaſe, which will now prove fatal. I have relieved, with this acid, one patient with ſpaſmodic aſthma; one with dyſpnœa, and two with piles. One of the caſes of piles, with the effeƈts of the acid of lemons upon another of my patients, I ſhall annex with this letter.

I remain, dear Sir,

Yarmouth, Your's very truly,

Aug. 2. 1797. THO. GIRDLESTONE.

A very ſtout made maiden lady, of about 34 years of age, had laboured for upwards of ſix years, under the moſt obſtinate piles. They were both external, internal, and blind; and had been treated by a variety of ſurgeons and phyſicians, in London and the country, to ſo little purpoſe, that for many months ſhe had attempted to derive all her medicinal aid from large doſes of caſtor oil, Ward's paſte, and a very low diet. Under this treatment, the tumors changed from the blind to the bleeding piles, but without the diſcharge affording any ſenſible diminution of pain. Her countenance was become exceedingly bloated, her perſon unuſually fat, her mind torpid, and ſhe was unable to walk, or to bear the motion of a carriage. In conſequence of theſe ſymptoms, I ordered her to take one grain of calomel every third night, with daily doſes of ferrum vitriolatum and caſcarilla, and two or three glaſſes of port wine in the 24 hours.

After about three week's perſeverance in this plan, ſhe became active, thinner, florider and

ſtronger; but the coſtiveneſs and local pains were only a little relieved.

She had perſiſted in theſe medicines about ten weeks without any farther benefit, when I was requeſted to think of ſome other means. The arrival of your publication determined me to try the nitric acid, without the aſſiſtance of any other medicine. She had not taken this acid above a week, before ſhe became regular in her bowels, free from pain, and able to bear the motion of a carriage, as well as the exerciſe of walking.

Her gums were tender after about a fortnight's uſe of the acid; but by diluting it more with water, ſhe has ever ſince been able to take this medicine, and to remain free from diſeaſe.

In the year 1796, a gentleman of a very ſtrong make, with dark colored hair, in about the fiftieth year of his age, had for ſix months, attempted to ſtarve himſelf to death, by feigning bodily diſeaſe. During the laſt weeks of thoſe ſix months, he had refuſed all ſorts of nouriſh-

ment but tea, without any ſugar in it. He was exceedingly emaciated; and under this diet, the little urine which he evacuated, had the appearance of the red particles of the blood mixed with the ſerum. His breath was fetid, and his tongue changed from a white to a browniſh color. His pulſe, which had been always very ſlow, was now ſtill ſlower, but not interrupted. The mind at length becoming weak as well as the body, he was brought to a confeſſion, that I had all along been right in aſſerting, he had reſiſted the calls of hunger. He was then gradually recovered from his emaciation, by the regular, but cautious ſupply of food. After ſeveral ſlight relapſes, which were checked by the obſervations of his friends, he took the opportunity of his relations being in London, in January, 1797, of reſuming his former melancholy determination. On the 12th of February I viſited him, and was informed, that for the laſt three weeks, he had lived entirely upon the juice of lemons and a little water. He was exceedingly languid and emaci-

ated, with a ſlow pulſe as before; and the little urine which he evacuated, had the former bloody appearance. His gums were ſwelled, and had a moſt beautiful crimſon tinge. He had a ſlight ſalivation, with a fetid breath, a dry cough, and a bluſh all over his ſkin, even over his hands and arms. He ſaid he was without pain, and that he felt perfectly tranquil. As I was not able to prevail on him to take any thing elſe, I deſired that he ſhould be indulged in the juice of lemons, until I ſhould ſee him again in three days. I ſaw him again on the 15th, and found him nearly as I had left him, except that the cough was now attended with an expectoration of mucus, which reſembled cream when mixed with a very ſmall portion of the freſh juice of raſpberries. In order to decoy him from this diet, I told him that a ſmall portion of acid contained much nouriſhment, and therefore he might continue to take the lemon juice, until he could reliſh ſome other food. On the 18th I ſaw him again, and found that under the pretence of no longer reliſhing acids, he, on

the evening of the 15th of February, had exchanged the lemon juice for ſtrong tea, which he had drunk without either ſugar or cream. His gums and his ſkin remained unuſually red, and his tongue moiſtened with much ſaliva ; but the cough and the expectoration had entirely left him. The urine was leſs bloody, probably from a larger quantity of liquid having been ſwallowed.

From this ſtate he continued growing more drowſy and feeble, until the 21ſt of March, when he became alarmed with ſuch a ſudden ſenſation of ſpaſm and weakneſs, as made him call for hot negus, and every thing which could be thought of to relieve him. He kept conſtantly ſwallowing food, which was as conſtantly rejected ; but it was accompanied with a large portion of viſcid mucus. In this ſtate he remained until the 25th of March, when I ſaw him, and found that notwithſtanding he had ſeemingly retained no food, yet he had acquired a conſiderable ſhare of ſtrength ſince my former viſit on the 18th of February. He had, however,

from the effects of the liquid food on his ſtomach, contracted a ſort of hydrophobiac horror at the ſight of liquids. He was therefore ordered ſlices of ſolid food, and half a grain of opium without any liquid, until brandy could be ſubſtituted for opium, and brandy and water for brandy. Under this treatment he gradually retained every ſort of food, and acquired more health and ſpirits, than he had enjoyed for many years.

To Dr. Beddoes. T. G.

Conversing with different individuals on the anti-ſiphylitic powers of the nitrous acid, I was informed by Dr. P. a ſtudent lately from Edinburgh, that one of the medical profeſſors there had frequently uſed it, but with ſmall ſucceſs. I immediately wrote to the profeſſor, and have been favoured with the following diſtinct ſummary of his experience.

Letter from Dr. Rutherford.

Edinburgh, Auguſt 24, 1797.

Sir,

I have made many trials of the nitrous acid in Lues, chiefly on patients in the Royal Infirmary, and with various ſucceſs. In ſome inſtances, as Dr. P—— informed you, this medicine has failed me altogether: but even then, though it ſeemed to have no power in removing the diſeaſe, yet it certainly did not produce any bad effects on the conſtitution. In other inſtances, however, the beneficial effects of it

have been moſt conſpicuous, abſolutely ſurprizing, and far greater than I remember to have ever ſeen produced, in the ſame ſpace of time, by any preparation of mercury. Such ſalutary effects have been remarked principally in the more advanced ſtages of the diſeaſe, when ſome of its moſt diſtreſſing ſymptoms were preſent; particularly ſevere pain in the bones, ſwellings in the perioſtium, fici, &c. I have ſeen all theſe paſs away moſt rapidly under the uſe of the acid. But I muſt acknowledge, that I have known the ſame ſymptoms to have recurred, ſoon after the medicine had been diſcontinued: and in one example where this had happened, the ſame complaints, which had yielded almoſt at once to the acid, now proved abſolutely refractory to it, and were at laſt removed by a courſe of mercury.

I have lately ſeen an inſtance or two, where the diſeaſe was ſo inveterate, and the conſtitution ſo broken, that neither the acid nor mercury were adequate to check the progreſs of the diſeaſe; as trial had been made

of both in ſucceſſion, but without any conſpicuous advantage: in theſe, therefore, the acid has been uſed at the ſame time with the mercury, and the two together have produced a moſt favourable change in almoſt every ſymptom.

What the particular circumſtances are, which occaſion ſuch difference of reſult in different examples, I confeſs I have not been able to aſcertain. I am happy, however, to think that theſe will probably ſoon be aſcertained, by ſome of the many ingenious obſervers, who, I learn, are now occupied with the ſubject. Moſt fortunate will it be for mankind, if a certain ſubſtitute be found for mercury, in the cure of lues, as well as other diſeaſes. And ſuch, I would hope, may ſoon be found in ſome of the acids, or their compounds. For though I cannot ſay that my own trials of the nitrous acid in lues have been uniformly ſo ſucceſsful as I might have expected from ſome printed accounts of its efficacy, which I have had acceſs to peruſe, yet they ſufficiently prove, that in certain ſtates of the

diſeaſe, and in certain conſtitutions, it is a remedy of very great value.

I have the honour to be, *&c.*

D. RUTHERFORD.

Royal Hoſpital, Plymouth, *Aug.* 28, 1797.

Sir,

THE caſe of Robert Harris, which I now beg leave to tranſmit, would have been ſent with the other caſes, but the event was then doubtful; as the man is now recovered, and his caſe a very ſingular one, and the uſe of the nitrous acid more exemplified, I thought it might merit your attention.

I have the honour to be, *&c.*

STEPHEN HAMMICK, Junr.

ROBERT HARRIS, a Seaman, aged 24, fair complexioned, was received into this Hoſpital, June 1ſt, 1797, for a venereal complaint. He ſays, three weeks after the connexion, he found a ſwelling in his left groin; at the expiration of ten days, he applied to the ſurgeon's mate, (the ſurgeon having been ſent on ſhore during the late mutiny;) ſome mercurial pills were ordered, which produced a ptyaliſm; and a poultice was applied to the part. About a

fortnight after, the bubo was opened by inciſion, but another ſoon formed lower down, which was opened in like manner; but both ſoon ſpread into one. A new ſurgeon was appointed to the ſhip, and the man was ſent to the Hoſpital. His bubo was now phagædenic, and, by an accurate meaſurement, was eight inches in circumference. The edges were much inflamed, and the bubo itſelf was black, foul, ſpreading, and diſcharging ichor highly offenſive to ourſelves, and intolerable to others. He was now weak and emaciated, without appetite, with night ſweats, diarrhœa, and a harraſſing cough. June 1ſt 1797, the day he became our patient, he took, *acid: nitros*: ℥ij, *ſyrupi ſimpl:* ℥viii, *decoct: lignor:* ℔ij, *m: et bibat quotidie.* The bubo was fomented with a ſtrong decoction of rad: althææ: capit: papaver, et flor: chamæm. A poultice of yeaſt and oatmeal was applied cold; he took an opiate at night, and a ſpermaceti mixture for his cough.

June 4th. The bubo in a ſpreading ſtate; the diarrhœa more profuſe; the nitric drink

continued; a rhubarb bolus, with confect: opiat: adminiſtered every ſixth hour.

9th. Large ſloughs thrown off in the poultice; the ulcer, nevertheleſs, continued to ſpread; flatus in the ſtomach and inteſtines; diarrhœa leſs; the bolus with rhubarb and confection taken only twice a day; two grains of opium given every ſix hours; nitric drink continued; a galbanum mixture for the flatus.

14th. The ſloughs caſt off; the ulcer was ſo wide and deep, that he was enjoined ſtrict confinement to his bed, leſt an artery, by exertion, ſhould burſt; the yeaſt poultice was changed for another made with freſh leaves of cicuta; his ſweats diminiſhed, and diarrhœa increaſed.

20th. The diſeaſe gained ground; the ulcer extended in circumference and depth. The man was ſo exhauſted that he could not raiſe himſelf in bed; was propped up with pillows, and deemed irrecoverable. The nitric medicine; fomentation juſt warm; cicuta poultice and opiate continued. Anxious to relieve, the occaſion preſſing, the nitric acid a new medicine, not

given by us in a caſe ſo deplorable, we adminiſtered the bark; but as every doſe was immediately vomited up, the bark was wholly laid aſide. 23d. Nitric drink continued: the myrrh mixture adminiſtered for the cough; this he took but one day, the ſtomach rejecting it. 25th. His ſituation conſidered deſperate by ourſelves, and others of the faculty, not belonging to the Hoſpital, whom curioſity drew hither from reports of the caſe; nitric drink, cicuta poultice, and opiate continued; almond oil mixed with honey, given for the cough. 26th. A gleam of hope; one of the inguinal glands began to clean, and the bubo ceaſed to ſpread: his recovery commenced. The edges of the bubo were accurately meaſured; its circumference was *fourteen inches and three quarters*; under the looſe and flabby edges, a probe, all around, was paſſed more than an inch; the lower part of the *muſculus iliacus internus*, the upper part of the *pectinalis* and *adductor longus femoris*, were laid bare; four of the inguinal glands, all bare as well the muſcles, were ſo

looſe that we expected their entire ſeparation. Though theſe appearances were favourable, yet he was very feeble, had ſtill diarrhœa and ſweats; a low pulſe, no appetite, and his urine paſſed from him involuntarily: nitric acid, poultice, and opiate continued. 30th. The ulcer clean, his ſpirits better, cough leſs; nitric drink continued. July 7th. The bubo ſtill cleaning; granulations riſing; appetite returning; ſweats and diarrhœa leſſening: nitric drink continued. July 14th. Bubo quite clean: granulations firmer; the fomentation and poultice diſcontinued; a dreſſing of ſimple white ointment on lint applied: appearance and health improved; cough ſtill leſs, diarrhœa ceaſed, ſweats abated. 24th. The inguinal glands not eminent; the granulations riſing to a level; his appetite good: ſat up two hours. 30th. Recovers rapidly. The ulcer fills up; moved about the ward on crutches; the nitrous acid reduced to one drachm and a half daily. He continued the drink in this quantity of the acid, to this day, Auguſt 28th; the bubo, though not

quite healed, is within the compaſs of a ſixpence; the cicatrix, as far as it had extended, is firm, and with a healthy appearance, with no tendency at all to ſpread again. His appetite, ſtrength, and fleſh are reſtored; his leg and thigh, however, are contracted, and he has ſometimes, by night, an involuntary diſcharge of urine. It is a pleaſure to remark, that he has not any appearance of the diſeaſe any where, in any form whatever. However, it is our intention to keep him under the nitric courſe, till the cicatrix is completely formed. It may be worth while here to notice, that he has taken *one hundred and ſixty-four drachms of the nitrous acid*; and this quantity has not produced the leaſt appearance tending to ſalivation.

To Dr. Beddoes.

Royal Hoſpital, *Aug.* 28, 1797.

Sir,

THE account of the caſe of Robert Harris, by Mr. Hammick, Junr. accompanies this letter. Mr. Hammick has already ſtated, that the patient has *taken one hundred and ſixty-four drachms* of the nitrous acid; that this quantity has not, in any degree, excited ſalivation, nor impaired the habit. Although he had a diarrhœa, he continued it, and the ſweats were reſtrained under its uſe. The opiates, though ſo largely adminiſtered, were given more with a view of alleviating pain, than to arreſt the ſphacelus in its progreſs. Opiates uncombined, have often been given in ſuch caſes, but have failed with us. The bark and myrrh were adminiſtered but one day; and every doſe was vomited up. It cannot therefore be ſaid, that tonic medicines aſſiſted. During the whole courſe, the man drank more than a pint of port wine daily. But port wine, it may be preſumed, would not cure the bubo. It is evident then, that no kind of

diet interferes with the nitrous acid, or counteracts its effect. The patients on whom this medicine has been tried, have uſed the different kinds of diet, according to the eſtabliſhed rules of the Hoſpital. This cure, thus far advanced, has not been made in *a corner*, but in a great Hoſpital. A ſhort hiſtory of every caſe in which the nitric acid has been uſed, was taken; the books and the medicines preſcribed, are now to be ſeen, and are open to any enquirer. The man himſelf is ſtill with us, and the veſtige of his malady is ſufficiently conſpicuous. Let it not be ſaid that the nitric acid may ſucceed with ſailors, and ſailors only. It has ſucceeded with marines, new recruits who had never embarked, and had no ſcurvy. Whatever may be the ſucceſs of this medicine, when its uſe becomes general, I can aver, from my own attention, that Mr. Hammick's account is true; that the caſe has been very accurately minuted, and faithfully ſtated. The caſe, though ſingular in its nature, progreſs, and cure, is not a ſingle inſtance of the efficacy of the nitrous acid. We

ſtill go on ſucceſsfully, and if in future we ſhould be diſappointed, if it ſhould not anſwer our expectations in every ſpecies of the venereal diſeaſe, we ſhall, as far as comes under our notice, remark, and communicate the failure. It would be wrong to impute infallibility to it. The medicine has failed in ſeveral inſtances, and ſo has mercury. It will require time, acumen, extenſive practice, unprejudiced judgment, to bring this medicine fairly to the teſt; to remark in what ſtages of the diſorder it will do good; where its ſucceſs may be doubtful; where it is certain. It ſeems to anſwer better in buboes, chancres, excoriations, than in venereal eruptions, diſſeminated over the whole body.

I am, &c.

FRA. GEACH.

On the eve of putting out the preſent collection of facts, it was incumbent upon me to aſcertain the ſituation of Mr. H——. This gentleman was the ſecond (probably the firſt truly venereal) patient ever treated by the nitrous acid in Europe. Nor could a more unpromiſing caſe preſent itſelf in any quarter of the globe. Having been repeatedly relieved of the ſecondary ſymptoms by mercury, he had conſtantly relapſed within three months. In autumn 1796, his condition had become dreadful. He ſuffered inexpreſſibly from the principal bones. Large nodes had formed. "The ſinews of his "arms, thighs and legs, were ſtiff and con-"tracted." See *Conſid. on Airs.* P. V. *Appendix*, p. 86. His noſe was enlarged. He ſwallowed with difficulty. His hands were a ſhapeleſs maſs. Of his fingers he had no uſe; they were rigid and every joint ſwelled. He lay in bed a mere

ſkeleton, without power to ſtir. In eight days after beginning on the nitrous acid, his pains were gone. On the tenth he walked. Nov. 29, 1796, I ſaw him free from all his ſymptoms, except ſtiffneſs of the fore-finger of his right hand. Except ſome flow of ſaliva, he had experienced none of the effects that mercury commonly produces. A few days ago, I found him following his occupation. He has juſt favoured me with the following note:

Sir,

I have the pleaſure to inform you, that I have been totally free from pain ſince I was ſo happily freed by the uſe of the nitrous acid; but the ſtiffneſs ſtill remains in the middle joint of the fore-finger of my right hand; and have alſo a breaking-out all over my body, which is attended with a violent itching, that breaks my reſt. I am now about to enter upon another

courſe of the acid, and have great hopes it will remove this diſagreeable complaint alſo.

I am, *&c.*

BRISTOL, R. H.
Auguſt 30, 1797.

The firſt caſe in which the nitric acid was tried in Europe (and tried in vain, ſee "*Conſid.*" *part* v. *appendix p.* 85), has proceeded in the following manner. The patient took ſix quarts of *Velno's veg. ſyrup*, without the ſmalleſt ſenſible effect. He then relinquiſhed medicine altogether. About this time he daily diſcharged a purulent ſlough from his noſe, which, as his feelings ſhewed, came from the poſterior nares; no ulceration was viſible in the throat. In the ſpring, exoſtoſes aroſe on the cranium. I concluded from former obſervations, that the medicines he had before uſed in ſuch immenſe quantity would cure him. I am this day (Sep. 4th.) informed, that he recommenced the free uſe of mercurial inunction and nitrous acid. During this courſe, his ſtrength improved, and in three weeks the nodes began to diminiſh, and in a month more totally diſappeared. During this proceſs, he rubbed in a pound of mercu-

rial ointment, and took ſix ounces of concentrated acid. Not the leaſt tendency to ſalivation appeared, nor any uncomfortable ſymptom. His health daily improved. But he ſtill every day blew the ſcab or ſlough out of his noſtrils. The mercurial pill was now given. The amendment went on rapidly, till within this fortnight, upon taking a ſlight cold, he was attacked with venereal ulceration of the throat. He has again returned to the nitrous acid and mercurial ointment, which he is to continue as long as he has any veſtige of diſeaſe behind the noſe.

Mr. Cruikſhank of the Royal Artillery, Woolwich, has lately publiſhed ſeventeen caſes of primary lues, treated ſucceſsfully; ſome by the nitrous acid; ſome by the citric; ſome by the oxygenated marine; and others by the oxygenated muriate of potaſh. He adds, (and in the preſent ſcarcity of comparative trials, the remark

deſerves attention,) that in one very recent caſe, the muriate ſucceeded, where the nitrous acid, in the doſe of three drachms daily, had little or no effect. Doctors Irwin, Jameſon, and Wittman, ſurgeons of artillery, have related fourteen cures in primary caſes. The latter reports a caſe in fair progreſs, and a ſecondary caſe that was proceeding promiſingly, till from great ſloughing in the throat, it became neceſſary to abandon the remedy, becauſe no liquid could be got down. Since March 13, 1797, he has uſed no medicine but nitrous acid, this having always anſwered. Dr. Currie, in general terms, bears witneſs to its efficacy; and Dr. Trotter mentions three cures of inveterate ſiphylis. (See *Two caſes of Diabetes* 2 *vols.* 8*vo.* *Dilly.*)

There is, therefore, already in favour of the nitrous acid, a far greater fulneſs and variety of teſtimony, than has ever been produced in favour of any of thoſe other ſubſtances that have at various times been propoſed as ſubſtitutes for mercury. From the whole it clearly refults,

that *where the conſtitution is broken, the habit feeble or ſcrophulous, the cure ſhould always be attempted by the nitrous acid, in preference to any other medicine.* Whether this rule is to be generaliſed, might very ſoon be determined. The propriety of removing every ſcruple, has induced me, at the riſque of a good deal of trouble, to hazard a propoſal, which the reader will find annexed to the preſent pamphlet.

By ſome ſuch plan, we may acquire, in two years, the knowledge of a century. Certainly we ſhall acquire enough to direct practice. A complete ſet of facts, or a theory will ſcarce be attained. For it will ſcarce be deemed juſtifiable to vary methods, till all the doubts, which an ingenious ſpeculator can ſtart, may be reſolved. It may aſſiſt enquirers, if I briefly ſtate ſome conſiderations, to which all who would draw juſt inferences muſt attend.

Whether we adopt the obſolete, or the prevailing language concerning the operation of mercury, is thus far indifferent. It is eaſy to conceive the great improbability, that a ſingle

power ſhould be excluſively adequate to the removal of ſiphylitic affections. The ſuppoſition is contrary to the general tenour of our experience of nature. Moſt of her productions appear to be members of a ſeries. There is hardly any ſubſtance or agency, of which it can be averred, *nec viget quicquam ſimile aut ſecundum.* If mercury eliminate the venereal virus by the ſalivary glands, other untried bodies may eliminate it by the ſame, or by other emunctories. But ſalivation not being eſſential, the curative operation is ſuppoſed to conſiſt in contractions of veſſels, nervous vibrations, or other actions of whoſe quality or quantity we have no teſt or meaſure. It is, however, difficult to ſuppoſe mercury, and mercury only, capable of exciting them: and in whatever you make the operation of mercury to conſiſt, an hundred modes or degrees of action, each different from the other, and all from any mercurials can produce, may be curative of ſiphylis. Mercurials probably produce other changes in the ſyſtem, beſides thoſe that ſuperſede the effects of venereal infec-

tion ; and ſome of theſe changes appear highly detrimental to certain conſtitutions. When hurried ſo as to produce violent ſalivation, mercurials are ſaid not to have cured ſiphylis.

Let us, for an inſtant, ſuppoſe that mercurials and the newly tried ſalts have a common operation, depending on oxygen. Now it is moſt likely that there is a given quantity of oxygen gas, which if inhaled, would cauſe the ſame feveriſhneſs that has been obſerved to follow the uſe of the oxygenated muriate, viz. thirſt, whiteneſs of the tongue, quickened circulation, and fizy blood ; or at leaſt, the latter of theſe appearances. Will oxygen gas, ſo affecting the ſyſtem, cure ſiphylis ? P. 105, part iii. of "*conſiderations on airs*," a caſe of ſiphylis is related, where oxygen gas was thought beneficial. But the circumſtances are indiſtinct, and I think the quantity of air too trifling for any effect. Again, will mercurials and our ſalts co-operate to a cure ? Will half the neceſſary quantity of a mercurial, joined to half the neceſſary quantity of nitrous acid, or oxygenated

muriate, give the ſame reſult as the full quantity of either? From a paſſage in Dr. Rutherford's letter, there is room to ſurmiſe that they would. And ſo they ought, if their action be identical, or if they owe their virtue ſolely to oxygen. We have not, it is true, ſuch accuracy in medicine as to halve neceſſary quantities or doſes; but, in a number of caſes a difference in the doſe ſhould be ſenſible, if the ſuppoſition is juſt.

Unleſs it be true, that very diverſified actions are capable of effecting a cure in ſiphylis, it would ſeem, from other facts, that no anti-ſiphylitic remedy can owe its virtue to oxygen. The occaſional efficacy of certain plants, as ſarſaparilla with mezereon, the aſtragalus exſcapus, &c. is ſtrongly atteſted. But how can the decoction of a bitteriſh, ſub-aſtringent root, ſuch as that of the aſtragalus, be imagined capable of oxygenating the ſyſtem? Nor indeed, have other plants, which have been ſaid to be uſeful in ſiphylis, the ſenſible or chemical qualities of thoſe ſubſtances that contain oxygen largely and

looſely combined. I refer to theſe plants for the ſake of illuſtration; and would by no means be underſtood to ſpeak of them, as generally uſeful in venereal complaints. There are, I believe, but few conſtitutions in which any of the number will be found efficacious, even in the ſecondary ſtage of lues. But it ſeems ſufficiently aſcertained that there are ſome (e. g. ſee *Girtanner's Vener. Krankh. i. Murray App. Med. vi.* 83.) It is to be lamented, that a catalogue of theſe plants, accompanied with what evidence exiſts of their powers, is not made out. For however diſagreeable medicinal drenches may be, nine patients in ten would ſwallow all the decoctions the ſurgeon can contrive, rather than endure the tortures of ſecondary ſiphylis. Our venders of quack medicines for venereal complaints, live, I ſuppoſe, chiefly upon theſe uncertain and neglected articles of the materia medica. Perhaps however their preparations are little elſe than ſugared decoction of the woods. Be this as it may, ſingle cures are proclaimed in advertiſements, and probably hundreds of failures ſuppreſſed.

A liſt of the ſubſtances, to the trial of which the principle of oxygenation leads, would be uſeleſs. In the ultimate medicinal reſults, differences will no doubt appear, which cannot be explained, from the degree of combination of oxygen. Oxygenated muriate cures the venereal diſorder. What will nitre do? It is curious that the citric and nitrous acids ſhould both cure lues venerea; but neither ſulphuric acid nor acid of tartar cure the ſcurvy. In ſuch a manner does nature play faſt and looſe with analogies!

If the nitro-muriatic acid *(aqua regia)* be uſed at all, great caution ſhould be obſerved in regard to the doſe. The variety, prepared with muriate of ammonia, (ſal ammoniac) may not anſwer, though the others ſhould. Some particulars, at leaſt, in the literary hiſtory of ſiphylis, favour this conjecture. Peyrilhe *(Remède nouveau, contre les maladies veneriennes. Paris*, 1794) having revived the uſe of volatile alkali, profeſſor Adolphus Murray deciſively ſhewed that the inflammation of chancres is increaſed

by it, and that in other forms of the diſorder, it is prejudicial. *Medit. circa methodum luis venereæ curandæ. Upſal*, 1779.

It is manifeſt, from all the facts taken together, that nitrous acid does not act like mercury upon the ſalivary glands. Delivering it by a tube low down in the mouth, is an experimentum crucis In ſome caſes, by ſtimulating the ſalivary orifices, it undoubtedly did occaſion ſalivation. In a caſe of ſpaſmodic aſthma, mercury brought on deep ulcers of the tongue. I ſaw the ſame from the nitrous acid.

Moſt obſervers have noticed the great effect of nitrous acid in increaſing the appetite. In the aſthmatic caſe juſt mentioned, and in a variety of inſtances, from the autumn of 1796, to the preſent time, I have myſelf witneſſed the fact. It has occurred in ſeveral delicate women with whom inappetency is a conſtitutional defect. In indigeſtion, attended by diminiſhed ſecretion of bile, I have experienced the utility of the nitrous acid. It has been effectual after *tuſſis hepatica*,—that terrible diſeaſe of hard drinkers

was fully formed. As a means of checking night ſweats in conſumption, it has ſhewn, in my practice, no ſuperiority over ſulphuric acid. Its tendency to produce diarrhœa appeared equal.

In the capacity of efficacious ſtimulants, totally different from opium, I expect that the nitrous acid and oxygenated muriate,* will ſupply an immenſe deſideratum in the materia medica. The effects they produce, point them out as deſerving trial, where the arterial, nervous, and abſorbent functions languiſh. I can corroborate this ſurmiſe by a few ſlight obſervations. But let me endeavour to ſhelter them from contempt, by remarking, that as they were not forwarded to me by their authors, ſo neither are they delivered by me to the public, as full

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* The oxygenated muriate of potaſh can be made cheap by ſome of the Mancheſter manufacturers. I ſhould think they could afford it at 1s. the ounce, or under. In London, I am informed, it is ſold at a moſt extravagant price.

evidence of the powers alledged, but merely to excite enquiry.

Nitrous acid in low fever. " At this moment, a fever is in the houſe, and rages with conſiderable ſeverity; and I am not without fear of its conſequences. It is what Cullen calls *typhus nervoſa.* The patient is very low, without delirium: nothing ſeems at preſent to tend to the more infectious ſpecies of this diſeaſe. I have frequently obſerved, and ſo muſt you, that the firſt has gradually changed into the laſt. I have tried the common remedies, and the debility increaſes, and the appetite even further diminiſhes. Three caſes of this diſeaſe have been lately treated by the nitrous acid, by one of our ſurgeons, Mr. Bartlett. With him it proved ſucceſsful, after bark and other bitters had been fruitleſſly exhibited. June 8th. Let four drops of the common acid of the ſhops, with as much water as makes it grateful to be taken for a doſe. I intend to give about 40 drops in 24 hours. June 9th. My patient has taken about a drachm of the acid. It was followed after a few doſes

only, an hour's interval being allowed between each doſe, by conſiderable reduction of the pulſe. From frequent, weak and thready, it became ſlow, equable and fuller. Between 6 and 7 hours refreſhing ſleep in the night; an effect which opium failed to produce. But the moſt material circumſtance is, that after a conſtant loathing of all food, from the commencement of the diſeaſe, to-day veal was craved and eaten, with ſome reliſh, to the quantity of upwards of an ounce along with greens."

"The exacerbation in this caſe, which was very conſiderable, and took place daily, felt the influence of the new medicine, the ſucceeding recurrence being ſlighter, when a few doſes only had been taken. The ſecond day broke its powers ſtill further, and changed the time. On the third day of uſing the acid, there came on nothing but a ſhort thrill and uneaſineſs. In two days more, my patient was convaleſcent, ſo as to ſit up in bed an hour and more at a time. Sleep returned and was refreſhing, which opiates had conſtantly diſturbed. The yellow

bark had, on trial, heated, and greatly increaſed the fever. A moderate portion of wine was allowed, mixed with panada for food."

"I muſt not too haſtily pronounce an eulogium on this medicine; but ſo far it augurs well. If my theory be right, we are to expect good effects from it in caſes, chiefly of great debility, whether from irritation of the nerves, or where there is ſolution of the fluids. Should my advice be required in confluent ſmall pox, I ſhould fly to it with hopes of ſucceſs."

"A friend has tried nitrous acid in a caſe of fever, where it failed: but he acknowledges it was ſuch as he ought not, on maturer deliberation, to have ventured its reputation in. The caſe was marked with conſiderable inflammatory action of the arterial ſyſtem. It rendered every ſymptom worſe." *Extracts of letters written in June and Auguſt*, 1797, *by Dr. Hamilton of Ipſwich.*

Caſe apparently of lymphatic affection with feveriſhneſs, treated by Mr. Bartlett, ſurgeon, of Ipſwich. Mrs. M. of a lax fibre, cachectic habit,

ſubject to dyſpepſia; has often pains in various parts of her body, eſpecially about the joints, reſembling chronic rheumatiſm; is frequently indiſpoſed by ſudden alterations in the temperature of the air, change of dreſs, or ſmall irregularities of diet. Within the laſt ſeven years, ſhe has had two returns of a ſort of rheumatic fever, attended with conſiderable debility, in each of which the diſeaſe, under the uſual treatment, continued at leaſt ſix weeks before ſhe could be properly termed a convaleſcent. Laſt ſpring ſhe had a return of this indiſpoſition. P. 110. Tongue foul and dry, thirſt, urine high-colored and without ſediment. Pains over her like rheumatiſm; wriſt and fingers greatly ſwelled, hard, but not diſcoloured by any redneſs. The fingers could not be bent (from the increaſed quantity of lymph depoſited by the exhalants and unabſorbed by the correſponding lymphatics?) whence Mr. B. concluded that there muſt be conſiderable debility in the lymphatics. The ancles and feet partook of the ſame tumefaction, though in a leſs degree. They were

hard to the touch and pale. Skin dry; ſleep diſturbed. The ſaline mixture, with *tinctura opii* and *vinum antimonii* was continued for ſeveral days, a gentle emetic, with a proportionate laxative being premiſed. The pores were opened by the medicine, but the fever not abated. This plan was now relinquiſhed, and as the diſeaſe appeared to partake ſo much of debility, the bark was adminiſtered, but with no better ſucceſs. Mr. B. began to be alarmed for the lady's ſafety. It was now he turned his attention to the nitrous acid. Three drops of the common acid of the ſhops. diluted with water, were given every three hours. The ſecond day, the fingers (before ſtiff and tumefied) were leſſened in ſize, and ſlightly moveable. Nights more refreſhing. Tongue becoming cleaner and moiſter. Urine paler, with ſediment. P. leſs frequent, and every troubleſome ſymptom yielding. One drop was added to the doſe, which was now taken 4 times a day. Under this treatment, the lady in about ſix days more, needed no further medicine. Her hands and